

Thursday, August 15, 2019

Attn: Ms. Jennifer Atkins AECOM 250 Apollo Drive Chelmsford, MA 01824

Project ID: GULF CHELSEA TERMINAL 60597375-0500

SDG ID: GCD82160

Sample ID#s: CD82160 - CD82162

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis/Shiller

Laboratory Director

NELAC - #NY11301 CT Lab Registration #PH-0618 MA Lab Registration #M-CT007

ME Lab Registration #CT-007

NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003 NY Lab Registration #11301 PA Lab Registration #68-03530

RI Lab Registration #63

UT Lab Registration #CT00007 VT Lab Registration #VT11301



587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

August 15, 2019

SDG I.D.: GCD82160

Project ID: GULF CHELSEA TERMINAL 60597375-0500

Client Id	Lab Id	Matrix
OUTFALL 003	CD82160	SURFACE WATER
TRIP BLANK 1	CD82161	SURFACE WATER
TRIP BLANK 2	CD82162	SURFACE WATER



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Analysis Report

August 15, 2019

FOR: Attn: Ms. Jennifer Atkins

AECOM

250 Apollo Drive

Chelmsford, MA 01824

Sample InformationCustody InformationDateTimeMatrix:SURFACE WATERCollected by:08/09/1910:45Location Code:AECOME-GULFReceived by:CP08/09/1916:00

Rush Request: Standard Analyzed by: see "By" below

Laboratory Data

SDG ID: GCD82160 Phoenix ID: CD82160

Project ID: GULF CHELSEA TERMINAL 60597375-0500

112185

Client ID: OUTFALL 003

P.O.#:

		RL/					
Parameter	Result	PQL	Units	Dilution	Date/Time	Ву	Reference
Oil and Grease by EPA 1664A	< 1.4	1.4	mg/L	1	08/10/19	DA	E1664A
рН	7.92	1.00	pH Units	1	08/10/19 03:58	RWR/KD	_B SM4500-H B-11
Total Suspended Solids	31	5.0	mg/L	1	08/13/19	BMD/BJ/	A SM2540D-11
Semi-Volatile Extraction	Completed				08/09/19	P/AK	SW3520C
Aromatic Volatiles w/Na	<u>apthalene</u>						
Benzene	ND	1.0	ug/L	1	08/09/19	МН	E624.1
Naphthalene	ND	1.0	ug/L	1	08/09/19	MH	E624.1
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	104		%	1	08/09/19	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	08/09/19	MH	70 - 130 %
% Dibromofluoromethane	102		%	1	08/09/19	MH	70 - 130 %
% Toluene-d8	101		%	1	08/09/19	MH	70 - 130 %
Semivolatiles by SIM, P	<u>PAH</u>						
Benzo(a)pyrene	ND	0.10	ug/L	1	08/12/19	WB	E625.1
Naphthalene	ND	0.48	ug/L	1	08/12/19	WB	E625.1
QA/QC Surrogates							
% 2-Fluorobiphenyl	59		%	1	08/12/19	WB	30 - 130 %
% Nitrobenzene-d5	83		%	1	08/12/19	WB	30 - 130 %
% Terphenyl-d14	23		%	1	08/12/19	WB	30 - 130 % 3

Project ID: GULF CHELSEA TERMINAL 60597375-0500

Client ID: OUTFALL 003

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

3 = This parameter exceeds laboratory specified limits.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Semi-Volatile Comment:

Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

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Phyllis Shiller, Laboratory Director

August 15, 2019

Reviewed and Released by: Rashmi Makol, Project Manager

Phoenix I.D.: CD82160



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Analysis Report

August 15, 2019

FOR: Attn: Ms. Jennifer Atkins

AECOM

250 Apollo Drive

Chelmsford, MA 01824

Sample Information **Custody Information** <u>Date</u> <u>Time</u> SURFACE WATER Collected by: 08/09/19 Matrix: 8:00 Location Code: Received by: CP **AECOME-GULF** 08/09/19 16:00 Rush Request: Standard

Analyzed by: see "By" below

RL/

aboratory Data

SDG ID: GCD82160

Phoenix ID: CD82161

GULF CHELSEA TERMINAL 60597375-0500 Project ID:

TRIP BLANK 1 Client ID:

112185

P.O.#:

Parameter Result **PQL** Units Dilution Date/Time Reference Βy Aromatic Volatiles w/Napthalene

Benzene	ND	1.0	ug/L	1	08/09/19	MH	E624.1
Naphthalene	ND	1.0	ug/L	1	08/09/19	MH	E624.1
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	08/09/19	MH	70 - 130 %
% Bromofluorobenzene	94		%	1	08/09/19	MH	70 - 130 %
% Dibromofluoromethane	101		%	1	08/09/19	MH	70 - 130 %
% Toluene-d8	106		%	1	08/09/19	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

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Phyllis Shiller, Laboratory Director

Reviewed and Released by: Rashmi Makol, Project Manager



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Analysis Report

August 15, 2019

FOR: Attn: Ms. Jennifer Atkins

AECOM

250 Apollo Drive

Chelmsford, MA 01824

Sample Information **Custody Information** <u>Date</u> <u>Time</u> SURFACE WATER Collected by: 08/09/19 Matrix: 8:00 Received by: CP **Location Code: AECOME-GULF** 08/09/19 16:00 Rush Request: Standard Analyzed by: see "By" below

P.O.#: 112185 aboratory Data

SDG ID: GCD82160

Phoenix ID: CD82162

GULF CHELSEA TERMINAL 60597375-0500 Project ID:

TRIP BLANK 2 Client ID:

RL/ Parameter Result **PQL** Units Dilution Date/Time Ву Reference

Aromatic Volatiles w/	Napthalene	<u> </u>					
Benzene	ND	1.0	ug/L	1	08/09/19	MH	E624.1
Naphthalene	ND	1.0	ug/L	1	08/09/19	MH	E624.1
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	103		%	1	08/09/19	MH	70 - 130 %
% Bromofluorobenzene	92		%	1	08/09/19	MH	70 - 130 %
% Dibromofluoromethane	98		%	1	08/09/19	MH	70 - 130 %
% Toluene-d8	102		%	1	08/09/19	MH	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

Reviewed and Released by: Rashmi Makol, Project Manager



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QA/QC Report

August 15, 2019

Oil and Grease by EPA 1664A

Total Suspended Solids

BRL

Parameter

Comment:

рΗ

QA/QC Data

SDG I.D.: GCD82160 RPD Blk Sample Dup Dup LCS LCSD LCS MS MSD MS Rec % Blank RL Result Result RPD % % **RPD RPD** Limits Limits % QA/QC Batch 491866 (mg/L), QC Sample No: CD81924 (CD82160) BRL 85 - 115 20 1.4 98.0 96.0 2.1 A Blank spike was performed instead of a matrix spike Additional: MS acceptance range 75-125%. QA/QC Batch 491874 (pH), QC Sample No: CD82245 (CD82160) 85 - 115 6.32 6.33 0.20 98.6 Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%. QA/QC Batch 492139 (mg/L), QC Sample No: CD82306 (CD82160)

97.0

85 - 115



587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

August 15, 2019

QA/QC Data

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 491836 (ug/l Semivolatiles by SIM,		le No: CD82160 (CD82160) rface Water									
Benzo(a)pyrene	ND	0.02	53	71	29.0				30 - 130	20	r
Naphthalene	ND	0.50	66	61	7.9				30 - 130	20	
% 2-Fluorobiphenyl	71	%	71	69	2.9				30 - 130	20	

96

89

75

7.6

11.3

% Terphenyl-d14 Comment:

% Nitrobenzene-d5

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 491944 (ug/L), QC Sample No: CD82161 (CD82160, CD82161, CD82162)

%

84

Volatiles - Surface Water

Benzene	ND	0.70	96	89	7.6	92	91	1.1	65 - 135	20
Naphthalene	ND	1.0	105	98	6.9	92	97	5.3	70 - 130	30
% 1,2-dichlorobenzene-d4	104	%	99	96	3.1	100	98	2.0	70 - 130	30
% Bromofluorobenzene	93	%	104	105	1.0	106	105	0.9	70 - 130	30
% Dibromofluoromethane	100	%	95	95	0.0	100	97	3.0	70 - 130	30
% Toluene-d8	103	%	101	100	1.0	98	98	0.0	70 - 130	30
Comment:										

A blank MS/MSD was analyzed with this batch.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference

Phyllis/Shiller, Laboratory Director

SDG I.D.: GCD82160

20

20

30 - 130

30 - 130

August 15, 2019

r = This parameter is outside laboratory RPD specified recovery limits.

Thursday, August 15, 2019

Sample Criteria Exceedances Report GCD82160 - AECOME-GULF

Criteria: None State: MA

State: MA

RL Analysis
SampNo Acode Phoenix Analyte Criteria Units

Result RL Criteria Units

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

^{***} No Data to Display ***



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Analysis Comments

August 15, 2019 SDG I.D.: GCD82160

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

Yes No Leact Options:	UST b with titles.	* 100 1 100 1 100 100 100 100 100 100 10	ALCO SELECTION OF STATE OF STA	Data Format Excel PDF GIS/Key Data Package Tier II Checklist Full Data Package* Phoenix Std Report Other Other
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HAIN OF CUSTODY RECORD iddle Turnpike, P.O. Box 370, Manchester, CT 06040 Firfo@phoenixlabs.com Fax (860) 645-0823 Client Services (860) 645-8726	Project: Gulf Chelsea Terminal / 60597375-0500 Report to: Jennifer Atkins Invoice to: AECOM QUOTE # AE012319RM	I TANGO TO THE CONTRACT OF THE	OMOOJA ×	
	Project: Gulf Chelsea T Report to: Jennifer At Invoice to: AECOM QUOTE # AE012319RM	Analysis Request	\$\frac{1}{2}\frac{1}{2	Date: Time: \$-9-19 (2.2€ \$4/49 (0.2€) Turnaround: 1 Day* 1 Day* 2 Days* 2 Days* 2 Days* 2 Standard 3 Other • SURCHARGE APPLIES
CI 587 East M Email:		n Date: W=Waste Water W=Wipe OIL=Oil	Sampled Sample	
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PHOENIX Environmental Laboratories,	AECOM 250 Apollo Drive Chelmsford, MA 01824 Jennifer Atkins	Sampler's Signature Matrix Code: WHE Raw Water SE-Sediment SL-Sludge S=Soil SD=Soild W=Wipe OIL=Oil	Customer Sample Identification Outfall 003 Trip Black 1	Relinquished by: Accepted by: Accepted by: Comments, Special Requirements or Regulations:
PHC Environme	Customer: Address:	Sampler's Signature Matrix Code: NW=Enmking Water RW=Raw Water SE B=Bulk L=Liquid	SAMPLE # SAM	Relinquighed by: